

IN THE CLAIMS:

The text of all pending claims are set forth below. Cancelled and withdrawn claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strike through~~. The status of each claim is indicated with one of (original), (currently amended), (previously amended), (cancelled), (withdrawn), (new), (previously added), (reinstated - formerly claim #), (previously reinstated), (re-presented - formerly dependent claim #) or, (previously re-presented).

Please CANCEL claim 1-12 the underlying PCT application, and ADD new claims 13-29 in accordance with the following:

1-12 (cancelled)

13. (new) A method for operating a mobile radio system with a first group of adjacent radio cells and a second group of adjacent radio cells, the first and second groups of radio cells being overlaid on each other, comprising:

measuring signal quality from a mobile station, which is operating at a current position in a first radio cell of the first group, to other radio cells of the first group that are adjacent to the first cell;

determining which of other radio cells of the first group has the best signal quality for the current position of the mobile station;

identifying a sub-group of radio cells from the second group based on which radio cell of the first group has the best signal quality; and

measuring signal quality from the mobile station to the sub-group of radio cells from the second group but not to other radio cells of the second group that are not included in the subgroup.

14. (new) The method according to Claim 13, wherein
the radio cells of the second group are smaller than the radio cells of the first group.

15. (new) The method according to Claim 13, wherein
the radio cells of the first group are operated in a different frequency range from radio cells of the second group.

16. (new) The method according to Claim 13, wherein

if the current position of the mobile station changes, a new sub-group of radio cells from the second group is identified before measuring signal quality to radio cells of the second group.

17. (new) The method according to Claim 13, wherein
the sub-group of radio cells from the second group is identified based on sub-group information describing which radio cells of the second group have a close relationship with the radio cell of the first group which has the best signal quality, and
the base station of the first radio cell transmits the sub-group information to the mobile station.

18. (new) The method according to Claim 17, wherein
the sub-group information specifies different sub-groups of radio cells from the second group for different radio cells of the first group,
the mobile station determines its actual position within the first radio cell and determines which of the other radio cells of the first group has the best signal quality for the actual position, and
the mobile station identifies the sub-group from the determined position and the sub-group information.

19. (new) The method according to Claim 17, wherein
when the mobile station moves and there is a change in the radio cell of the first group having the best signal quality, new sub-group information is generated and transmitted from the base station of the first radio cell to the mobile station.

20. (new) The method according to Claim 17, wherein
the base station of the first radio cell uses a directional antenna to transmit the sub-group information.

21. (new) The method according to claim 13, wherein
each radio cell is served by a base station, and
signal quality measurements are taken from the mobile station to the base stations serving the respective radio cells.

22. (new) The method according to claim 21, wherein for a least a portion of the radio

cells, a single base station served two or more radio cells.

23. (new) The method according to Claim 14, wherein
the radio cells of the first group are operated in a different frequency range from radio cells of the second group.

24. (new) The method according to Claim 23, wherein
if the current position of the mobile station changes, a new sub-group of radio cells from the second group is identified before measuring signal quality to radio cells of the second group.

25. (new) The method according to Claim 24, wherein
the sub-group of radio cells from the second group is identified based on sub-group information describing which radio cells of the second group have a close relationship with the radio cell of the first group which has the best signal quality, and
the base station of the first radio cell transmits the sub-group information to the mobile station.

26. (new) The method according to Claim 25, wherein
the sub-group information specifies different sub-groups of radio cells from the second group for different radio cells of the first group,
the mobile station determines its actual position within the first radio cell and determines which of the other radio cells of the first group has the best signal quality for the actual position, and
the mobile station identifies the sub-group from the determined position and the sub-group information.

27. (new) The method according to Claim 25, wherein
when the mobile station moves and there is a change in the radio cell of the first group having the best signal quality, new sub-group information is generated and transmitted from the base station of the first radio cell to the mobile station.

28. (new) The method according to Claim 25, wherein
the base station of the first radio cell uses a directional antenna to transmit the sub-group information.

29. (new) A device to determine a sub-group of adjacent radio cells in a mobile radio system with a first group of adjacent radio cells and a second group of adjacent radio cells, the first and second groups of radio cells being overlaid on each other, comprising:

a first measurement unit to measure signal quality from a mobile station, which is operating at a current position in a first radio cell of the first group, to other radio cells of the first group that are adjacent to the first cell;

a determination unit to determine which of other radio cells of the first group has the best signal quality for the current position of the mobile station;

an identification unit to identify a sub-group of radio cells from the second group based on which radio cell of the first group has the best signal quality; and

a second measurement unit to measure signal quality from the mobile station to the sub-group of radio cells from the second group but not to other radio cells of the second group that are not included in the subgroup.